

Article 34

## 8

## CLAIMS

- 5           1. Magnetic conditioning device for diesel engine fuel characterised in that it comprises a housing element, placed along the fuel feeding line, having a fuel inlet and a fuel outlet, and providing a wall in correspondence of the inlet to deviate the inlet fuel, and an obliged path for the fuel, being provided at least two opposed magnetic elements, along said obliged path, inducing a magnetic field on the flowing fuel.
- 10           2. Magnetic conditioning device for diesel engine fuel according to claim 1, characterised in that said device provides a central cylindrical hub.
- 15           3. Magnetic conditioning device for diesel engine fuel according to claim 2 or 3, characterised in that said obliged path has such a shape to ensure a long passage of the fuel within the device.
4. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that the magnetic field is created by permanent magnets.
- 20           5. Magnetic conditioning device for diesel engine fuel according to claim 4, characterised in that said permanent magnets are comprised of neodymium magnets, having a protective anti-corrosion coating.
- 25           6. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims 1 - 3, characterised in that said permanent magnets are comprised of ferrite.
- 30           7. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that two permanent magnets are provided mounted opposed, said magnets having an opposed polarisation on the faces faced toward the fuel flow.
8. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims 1 - 6, characterised in that said magnetic elements are comprised of permanent magnets provided on two ferromagnetic opposed elements.
- 35           9. Magnetic conditioning device for diesel engine fuel according to claim 8, characterised in that said permanent magnets are

Article 34

9

comprised of integral tablets or rings, having an opposed polarisation of the faces faced toward the fuel flow.

5 10. Magnetic conditioning device for diesel engine fuel according to claim 8, characterised in that said permanent magnets are comprised of integral tablets or rings, having an alternate polarisation between the permanent magnets placed side by side on the same ferromagnetic material, being provided permanent magnets having an opposed polarity respectively opposed faced each other.

10 11. Magnetic conditioning device for diesel engine fuel according to claim 8, 9 or 10, characterised in that said permanent magnets are flush with the ferromagnetic material or projecting with respect to the same.

15 12. Magnetic conditioning device for diesel engine fuel according to claim 8 or 9, characterised in that said permanent magnetic elements have a horseshoe shape.

20 13. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that said device provides a lower portion and an upper portion, or lid, removably coupled each other.

25 14. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that projecting elements are provided, preferably metallic elements provided inside the container.

30 15. Magnetic conditioning device for diesel engine fuel according to claim 14, characterised in that said projecting elements are provided on one or both the inner surfaces of the device.

16. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that it is provided an atmosphere vent.

17. Magnetic conditioning device for diesel engine fuel according to one of the preceding claims, characterised in that said device is comprised of a central body and two lids, respectively an upper and a lower lid.